



Missouri
Department of
Natural Resources

Empire District Electric Company
Power Plant Name: Empire Energy Center
Electric Generation and Emissions in 2011

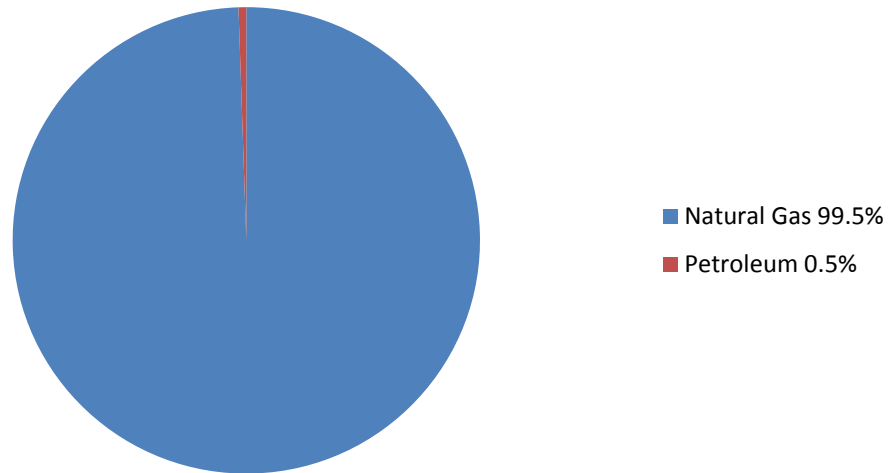
Generation Tables

	Fuel Consumption, MMBTUs	Percent of Total		Net Electric Power Generated, MWh	Percent of Total	
Non-renewable sources						
Coal						
Natural Gas	754,219	99.4%	99.4%	59,227	99.5%	99.5%
Petroleum	4,678	0.6%	0.6%	318	0.5%	0.5%
Nuclear						
Other						
Non-renewable total	758,897	100.0%	100.0%	59,545	100.0%	100.0%
Renewable sources						
Biomass						
Hydroelectric						
Landfill Gas						
Solar						
Waste Fuels						
Wind						
Wood						
Renewable total						
Grand total	758,897		100.0%	59,545		100.0%

Fuel Type	Physical Units	Number of Units
Natural Gas	MCf	739,712
Distillate Fuel Oil	Barrels	831



Net Generation by Fuel Type, 2011 for Empire Energy Center





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Power Plant Nameplate information for Empire Energy Center

Plant Name	County Location	Generator	Generator Type	Generator Status	Nameplate Capacity (MW)
<i>Empire Energy Center</i>		<i>All Operating Generators</i>			<i>1,516.0</i>
Empire Energy Center	Jasper	1	Combustion (Gas) Turbine (includes jet engine design)	Operating - in service	516.0
Empire Energy Center	Jasper	2	Combustion (Gas) Turbine (includes jet engine design)	Operating - in service	516.0
Empire Energy Center	Jasper	3	Combustion (Gas) Turbine (includes jet engine design)	Operating - in service	242.0
Empire Energy Center	Jasper	4	Combustion (Gas) Turbine (includes jet engine design)	Operating - in service	242.0



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Emissions from Electricity Generated in 2011: Empire Energy Center

	CO2 Equivalent (TONS)	Carbon Dioxide (CO2) (TONS)	Methane (CH4) (TONS)	Nitrogen Dioxide (NO2) (TONS)
Empire Energy Center	355,894	177,831	3,387	345

	Sulfur Dioxide (SO2) (TONS)	Annual Nitrogen Oxide (NOx) (TONS)	Summer Nitrogen Oxide (NOx) (TONS)
Empire Energy Center	0	0.0000	0.0000

Identified Flue Gas Desulfurization (FGD) controls installed on Empire Energy Center power plant

Plant	Control Equipment	Sorbent Type
	No FGD Controls Installed	

Identified Flue Gas Particulate (FGP) controls installed on Empire Energy Center power plant

Plant	Control Equipment
	No FGP Controls Installed



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Notes:

Generation, emissions and pollution control data include power plants owned by the utility and located in Missouri.

Emissions data calculated by Missouri Department of Natural Resources, Division of Energy, from EIA Fuel Consumption Data

Fuel Consumption and Generation Data from United States Energy Information Administration, Form 923, United States Department of Energy
<http://www.eia.gov/electricity/data/eia923>

Pollution control data (FGD and FGP equipment) from United States Energy Information Administration, Form 860, United States Department of Energy
<http://www.eia.gov/electricity/data/eia860/index.html>

Emissions factors for fuel-based generation from United States Environmental Protection Agency "Emission Factors for Greenhouse Gas Inventories", November 7, 2011,
<http://www.epa.gov/climateleadership/documents/emission-factors.pdf>